

### **REMARKS**

Claims 11 and 17 are amended in the application.

Applicants would like to thank Examiner Tran for taking the time to discuss the outstanding rejections in this case with Applicants' representatives on June 7, 2006. The substance of the discussion that took place is summarized in the relevant sections below.

#### **Rejection of Claims 11 and 17 Under 35 U.S.C. §112, Second Paragraph**

The Office Action rejected claims 11 and 17 under 35 U.S.C. §112, second paragraph for alleged indefiniteness in the recitation of "first and second repertoires of single chain polypeptides are present on a solid surface in a first and second series of continuous, non-intersecting lines, respectively, such that each line of said first series intersects with each line of said second series, such that members of the first repertoire are juxtaposed to members of the second repertoire." The analogous language in claim 17, relating to the formation of three-chain polypeptides, was also rejected. The Office Action asserted that this phrase is vague because it is unclear how the lines can be non-intersecting, yet intersect. In addition, the Office Action states that the intersection of the lines "would result in a single amino acid interaction of the polypeptide chains." In view of the amendments made to the claims, Applicants traverse the rejection.

The claims have been amended to clarify that the lines of the first series do not intersect with each other, and the lines of the second series do not intersect with each other (and, with respect to claim 17, the lines of the third series do not intersect with each other), but that each line of the first series intersects with each line of the second series (and, with respect to claim 17, the lines of the first and second series intersect with the lines of the third series). These amendments were discussed with Examiner Tran during the telephone interview of June 7, 2006, during which Examiner Tran stated that the amended claims should obviate the §112, second paragraph rejection.

In addition, the Office Action states that "because as claimed in the instant claimed methods the series of lines are "continuous, non-intersecting lines" and they "intersects" is broad

such that would not be unreasonable to interpret the claims to encompass the interpretation that the intersection of the lines would result in a single amino acid interaction of the polypeptide chains.” Although Examiner Tran stated during the telephone interview that the amendments made to the claims would overcome the §112, second paragraph rejections, Applicants would like to clarify the record. While Applicants maintain the position taken in the response filed on January 31, 2006, that the claims do not encompass a scenario in which the actual amino acid sequence of a given single-chain polypeptide member is physically placed in a continuous line; that is, that the contiguous series of amino acid molecules that constitute the polypeptide are physically arranged in a continuous line, it is nonetheless possible that as between polypeptide members of the first and second (and third) repertoires, the interaction between polypeptide molecules may be a single amino acid interaction. This is not the same as the position advocated in the Office Action and, thus, is consistent with Applicants’ prior response and the claims as amended above.

**Rejection of Claims 11 and 17 Under 35 U.S.C. §103(a)**

The Office Action rejected claims 11 and 17 under 35 U.S.C. §103(a) as allegedly unpatentable over the teachings of Wagner et al. in view of Winkler et al. The Office Action asserts that Winkler et al. teach a flow channel method for making large arrays of polymers. The Office Action asserts that Wagner et al. teach forming an array of capture agents on a solid support, and that Wagner et al. teach that the capture agents can include antibody fragments. The Office Action concludes that it would have been obvious to combine the teachings of both Wagner et al. and Winkler et al. to arrive at the claimed invention. Applicants respectfully disagree.

In order to render the instant claims obvious, the prior art reference (or references when combined) must teach or suggest *all the claim limitations*. *In re Royka*, 490 F.2d 981, 180 U.S.P.Q. 580 (C.C.P.A. 1974). Whether considered alone or together, Wagner et al. and Winkler et al fail to teach a method for generating a combinatorial library of two- or three-chain polypeptides as claimed.

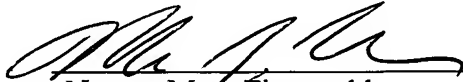
Wagner et al. merely teach applying a protein capture agent, such as an antibody or antibody fragment, on a solid surface to form an array. Wagner et al. do not teach a method of arraying or combining separate repertoires of single chain polypeptides to form combinatorial libraries of two- or three-chain polypeptides. Moreover, regardless of the array format taught by Wagner et al., there is no teaching in Wagner et al. of a method for generating polypeptide libraries of two- or three-chain polypeptides from separate repertoires of single-chain polypeptide. The Office Action asserts that Wagner et al. teaches a “fusion protein, i.e. ‘two- or three-chain polypeptides’” and makes reference to col. 23, lines 57-59 of Wagner et al. This portion of Wagner et al. teaches that the protein-capture agent can be fused to an adaptor (spacer), which is, in turn, fused to an affinity tag for attachment to a solid substrate. This does not amount to a teaching of a two- or three-chain polypeptide formed by the juxtaposition of libraries of single-chain polypeptides as recited in the instant claims.

Winkler et al. do not supplement the deficient teachings of Wagner et al. Winkler merely teaches a method of generating polymers on a substrate by flowing the monomer subunits into channels in or on the substrate. Winkler et al. do not teach or even suggest a method for generating polypeptide libraries of two- or three-chain polypeptides from separate repertoires of single-chain polypeptide. Thus, whether considered alone or together, the teachings of Wagner et al. and Winkler et al. do not teach each element of the claimed invention. Accordingly, the instant claims are not obvious in view of the teachings of Wagner et al. and Winkler et al., and Applicants respectfully request that the rejection be reconsidered and withdrawn.

Applicant submits that all claims are allowable as written and respectfully request early favorable action by the Examiner. If the Examiner believes that a telephone conversation with Applicant's attorney/agent would expedite prosecution of this application, the Examiner is cordially invited to call the undersigned attorney/agent of record.

Respectfully submitted,

Date: July 10, 2006



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